

ROCKY MOUNTAIN MEDICAL JOURNAL

Title Registered U. S. Patent Office



APRIL 1961

Volume 58, Number 4

Publication Office
835 Republic Building
1612 Tremont Place
Denver 2, Colorado
Telephone AComa 2-0547

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FRONT COVER

Canyon road scene in Santa Fe, New Mexico. Here is one of the oldest thoroughfares in Santa Fe. This road parallels the Santa Fe River and has been trod by several generations of inhabitants—this since the time of the first settlements here in the early 1600's.
—New Mexico State Tourist Bureau

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Membership and Sponsorship: The Rocky Mountain Medical Journal is owned by the Colorado State Medical Society and is published monthly as a nonprofit enterprise for the mutual benefit of the organizations which jointly sponsor it. It is published under the direction of the Board of Trustees of the Colorado State Medical Society, assisted by an Editorial Board representing the sponsoring organizations. It is the Official Journal of the Rocky Mountain Medical Conference and those medical societies who are represented on the Editorial Board listed above.

Advertising: National representative: The State Medical Journal Advertising Bureau, Inc., 510 North Dearborn Street, Chicago 10, Ill.

Subscription: \$5.00 per year in advance, postpaid in the United States and its possessions; single copy 50c plus postage. Subscription is included in medical society dues of sponsoring state medical organizations. **Copyright:** This Journal is copyright, 1961, by the Colorado State Medical Society. Requests for permission to reproduce anything from the columns of this Journal should be addressed to the Journal office.

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It is generally agreed that after surgery, or at other times of physiologic stress, vitamin reserves may be depleted. MYADEC helps to correct such deficiencies. Just one capsule daily supplies therapeutic potencies of 9 vitamins, *plus* various minerals normally found in body tissues. MYADEC is also valuable for the *prevention* of vitamin deficiencies in those patients whose customary diets are lacking in important food factors. Each MYADEC capsule contains:

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PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 22, Michigan



HOW OFTEN LATELY has someone said, "You are a wonderful doctor," asks a well-known magazine editor. Not often? Woodrow Wirsig, editor of *Printers' Ink*, the weekly news magazine of advertising and marketing, finds

*If You Don't,
Someone Else Will*

there is a reason why fewer patients today say complimentary things about their medical care. The public, he asserts, is developing a strong resentment toward doctors. It seems to make little difference to them that United States medical services are the best anywhere in the world. A poor "image" of the American physician is shared by too many of our patients. An "image" in modern communication terms is a deep rooted attitude, something people think or believe, whether really true or not.

What has caused this unfavorable and hostile attitude of the very people whom the doctor dedicates his life to serving? Mr. Wirsig analyzed this question at a Southern Medical Association panel on medical economics, presented by the Wm. S. Merrell Company. One reason, Mr. Wirsig finds, is that though we have become more skilled and learned . . . in fact, medical science stands on the verge of breakthroughs in cancer and heart disease . . . yet doctors as a group appear to be unaware of social, economic and political demands moving like a whirlwind toward them.

Doctors know better than anyone that change is constantly reshaping our lives. Nearly everything changes. Education gets better or worse; communications improve or fail; people learn more or less. Mr. Wirsig warns that the public is today aware that social patterns lag behind the developments of science—and they are now no longer willing to accept this lag. So, Mr. Wirsig tells us, the physician's tarnished image in the minds of the public presents a threat and a challenge. Unless *doctors themselves* find a way to meet the challenge, someone else will do

it for them. Editor Wirsig, troubled over the consequences, cautions that we must realize the nation's health has ceased to be the concern only of the individual citizen. Now it is a matter of universal concern. Like it or not, health has become a national asset to be regarded by many as the government's responsibility.

Here is Mr. Wirsig's prescription: Medicine, while it may have difficulty keeping up with eco-social changes, nevertheless must keep up, change, and lead the way if it is to survive in any recognizable form as we know it today. Doctors must take the initiative in health care programs and come forward with whatever new plan is necessary. Doctors have the knowledge with which to work their own salvation at a time of crisis. They can do it brilliantly . . . and, if they don't, someone else will.

OUR READERS WILL RECALL an article in our December, 1960, issue by Dr. Amos Koontz criticizing the medical program of the Veterans Administration. It was accompanied by a dispassionate editorial in sensible rebuttal by our assistant editor,

*A Sticky
Problem*

Dr. James R. Leake, a former V. A. trainee. Considerable static has followed, pro and con. Here is an excerpt from a letter directed to Dr. Paul Ireland, Manager of the V. A. Hospital in Denver, over the signature of Dr. William Middleton, Chief Medical Director of the V. A.:

Of course, as you know, Amos Koontz, a good friend of mine, has been crusading against the medical program of the Veterans Administration. Unfortunately, his evangelistic spirit has exceeded reason and actual support. Dr. Leake has done well in meeting certain of his extravagances frontally and dispassionately. We have abstained from public rebuttals for obvious reasons. The press likes nothing so much as a feud.

Will you be so good as to extend to Dr. Leake my personal appreciation of his fair dealing with

a sticky problem. As all of us know, we are carrying out the mandate of the American people as expressed by the will of Congress.

There is no question about the prevalence of resentment, both in and out of our profession, regarding care of nonservice-connected disabilities and exploitation of political pressures. The "mandate of the American people as expressed by the will of Congress" goes along for benefit of large blocs of voters, conspicuously veterans and aged people. This does not necessarily mean that the mandates are fair and equitable to all people—especially taxpayers!

GATHER ROUND AND LEND AN EAR, boys; let's have a laugh!

At last the threadbare format of the J.A.M.A. has been brought up-to-date; that is, almost. The jacket which bound the journals stacked to the

**Editorial Policy—
More Than
Meets the Eye!**

ceiling in offices of our horse and buggy predecessors has given way to one that even shows a spot of red which, if not overdone, catches the eye—so we are told by artists. And the parental Journal also has alterations in editorial staff and policy. There is to be new tone, style, and flavor. Authors' personality, tastes and even peculiarities are to be retained when possible and reasonably dignified; they are not to be brutally edited out to perpetuate cold and hackneyed monotony. Its Correspondence section last fall bravely published a communication from an ophthalmologist who, for some unexplained reason, had perused the American Journal of Proctology. Our astute colleague fell upon a gem written by Dr. Walter C. Bornemeier entitled, "Sphincter - Protecting Hemorrhoidectomy." Dr. Herman F. Meyer of Chicago, himself a scholar, could not resist submitting for all of us to see his idea of masterful description:

The prime objective of a hemorrhoidectomy is to remove the offending varicosity with as little damage as possible to the patient. You can damage, deform, ruin, remove, abuse, amputate, maim, or mutilate every structure in and around the anus except one. That structure is the sphincter ani. There is not a muscle or structure in the body that has a more keenly developed sense of

alertness and ability to accommodate itself to varying situations.

They say that man has succeeded where the animals fail because of the clever use of his hands, yet when compared to the hands, the sphincter ani is far superior. If you place into your cupped hands a mixture of fluid, solid, and gas and then through an opening at the bottom try to let only the gas escape, you will fail. Yet the sphincter ani can do it! The sphincter apparently can differentiate between solid, fluid, and gas. It apparently can tell whether its owner is alone or with someone; whether standing up or sitting down; whether its owner has his pants off or on. No other muscle in the body is such a protector of the dignity of man, yet so ready to come to his relief. A muscle like this is worth protecting!

Thank you, Dr. Bornemeier, for this delectable triumph in conveying your thoughts; and thank you, Dr. Meyer, for plucking it out for more of us to share. May you often escape the confines of your orbits and peruse the twilight zones where the majority of us, in a rut, seldom tread—until it begins to hurt!

INDIGNATION, both in and out of our profession, has been rife toward the Columbia Broadcasting System's "report" on the "business" of health a few weeks ago.

**Biased Rigging of the
News—Disservice
To the People**

a leading Denver attorney:

Mr. James T. Aubrey, Jr., President,
Columbia Broadcasting System, Inc.
485 Madison Avenue
New York 22, New York

Dear Mr. Aubrey:

I had about made up my mind to swallow my indignation concerning the recent Columbia Broadcasting System's "Report" on the subject of "The Health Business," feeling that probably any expression of my reaction would be futile and at most receive merely a perfunctory reply. However, having received today a copy of your "Point of View" pamphlet describing your concern over program practices, it occurs to me that at least in the upper echelons of your enterprise there may be some sincere concern over the responsibility of television producers and networks to aspire to standards of journalism higher, as your pamphlet states, than "the morals of the market place."

February 9, 1961

With this hope, therefore, may I submit a word concerning my reaction and that of a number of my friends who also watched this program purporting to depict the practice of medicine in the United States. I find it difficult, even after the lapse of a week or so, to be temperate in my criticism of one of the most slanted pieces of journalistic reporting I have ever seen. For an hour the television audience was regaled with what seemed to me to be calculated propaganda directed against the bulk of American medical practitioners and in favor of the organizations which have promoted the concept of group or government medicine.

I have heard much on both sides of this question and readily concede that there are sound arguments on both sides. A fair and balanced presentation of these arguments by you or any other media would be a public service. On the other hand, the program in question appeared to be a contrived effort to discredit the American physician and the American Medical Association through totally unwarranted emphasis upon a few of their respective misdeeds and almost an entire omission of reference to the vast public and private contributions made by that profession to lead American medicine into its present pre-eminent world position. For example, the time devoted to the squalid and rather McCarthyesque hearing in New York concerning the Staten Island Medical Society occupied far more emphasis in the program than the statements of the representatives, both official and unofficial, of the American Medical Association. Indeed, I gained the impression that these latter statements were edited so as to show up the American Medical Association to the poorest possible advantage. On the contrary, the spokesmen for the sundry group-medicine practitioners seem to have been chosen to produce an air of Olympian wisdom.

I cannot believe that the balance of right and wrong and of saint and sinner in fact lies so heavily against the great bulk of ethical and hard working medical practitioners in the United States.

Having read a good bit about the really serious difficulties which the medical profession is now having in attracting an adequate number of qualified young people into medical schools, I find it rather appalling to contemplate the additional discouraging effect of a program such as yours on those who are considering entering that profession.

I trust, therefore, you will pardon me for conveying to you my opinion that in the presentation of this program you did a great disservice not only to the medical profession and the public, but to the journalistic integrity of your organization and the others in the same field.

Very truly yours,
Peter H. Holme, Jr.

From a highly intelligent source outside our profession, this communication should

see the light of day in print where thoughtful people will be inspired to raise voices against rigged and prejudicial broadcasts.

THE EDITORIAL STAFF of the Rocky Mountain Medical Journal has recently suffered another loss, the first having been the death of Dr. Aaron Margulis, scientific editor for New Mexico. Our second loss, fortunately,

was less decisive and we hope she may some day return.

Editorial

Assistant Departs

Lillian Hunsdorfer found it necessary to

return to Detroit because of her aging mother's illness. She was one of our valued employees who for two years worked closely with the editing and makeup of our Journal. Her personality, pleasant demeanor, enthusiasm and unqualified cooperation with the rest of us made her association a pleasure. These traits are rare, hard to find, and even more difficult to replace.

May your new "assignment" be blessed with progress and success, Lillian.

AN INTERESTING COMMUNICATION has been received from Medical World News regarding the 1960 census. There are significant trends in the ways physicians are reacting to shifts in the nation's population. More doctors are practicing in the large urban centers, even where population has declined. Our ranks have swelled mostly in the South, Southwest, and the Pacific Coast.

The Lure of The City

The average of doctors per capita in 50 representative cities is one per 452 inhabitants; the average for all the U. S. is one physician per 835 people. The conclusion of the survey is Go West (or South), young doctor!

We might add, go to a smaller community where fine people need and will welcome you and your family. You will sooner be a more useful citizen, your children a part of more wholesome activities with a host of steadfast friends, and the entire family growing up in a better place to live!

Ethics and public relations*

The physician's responsibility to patients and to himself

C. S. Bluemel, M.D., Denver

The late Dr. Bluemel was a talented teacher, writer, speaker, scholar and nobleman. Among his priceless activities and contributions on behalf of our profession was his perennial talk to new physicians. Time did not permit him to write it out, but it was always timely and never trite. Fortunately, we struck a tape recording of this, his last, talk as a "faculty" member of the Orientation Course set up for new Colorado State Medical Society members. Here is a classic which should be read and re-read by all of us as it is preserved for inspiration and guidance of ourselves and our posterity.

THERE APPEARS TO BE A NEW SPECIALTY in the practice of law—the prosecution of personal injury claims. According to a recent article in Harper's Magazine, this type of legal work now takes up three-fourths of the time of the civil courts as contrasted with 5 per cent of the time in the courts of England. However, in England the case load is increasing also. The large number of automobile accidents accounts in part for the avalanche of

claims in court. But there is sometimes something screwy about these claims. In Boston a truck was run into by a streetcar. The capacity of the streetcar was 68 passengers, but 240 claims resulted from the accident. Even the sidewalk observer may now establish a claim. A woman witnessed an automobile accident and shortly miscarried. She filed suit against one of the drivers and collected \$90,000. There is a large volume of medical malpractice suits in court and it is estimated that at any one time there are 5,000 such cases pending. In addition to the 5,000, there are many in which there is negotiation for settlement out of court, and some which are being dropped because they have no substance. Jury awards are sometimes out of line. Justice Miles McDonald of the New York State Supreme Court says that 80 per cent of the awards in his area are excessive. They appear to be excessive in other areas also. The Consolidated Edison Co. of Chicago was sued by a boy who was injured in an explosion. The jury awarded the boy \$600,000. When invested at interest this amounts to \$30,000 a year with the principal still intact.

Attorney specialists

There is a national organization of attorneys which specializes in handling personal injury claims. This includes malpractice cases. They call themselves "The National Association of Claimants' Compensation Attorneys," sometimes called "Nacca" for short. The active spirit in the group is Melvin Belli. He has won more than 100 so-called "jumbo" verdicts in malpractice and personal injury cases. A "jumbo" verdict is one of \$100,000

*Presented at the Orientation Course for New Members by the C.S.M.S. on September 14, 1960.

or more. That's \$10,000,000 in terms of which the attorney gets one-third.

There is an affiliated group in Colorado, "The Colorado Association of Claimants Compensation Attorneys." It has 65 members. All of these men, who are well trained in court procedures, make much of demonstrative evidence—evidence which the jury can all see and understand. For instance, passing the claimant's artificial leg around the jury for them all to feel and touch; a skull may be used where the claimant alleges head injuries or headaches, and then the colored photograph blown up to life size is also commonly used in these demonstrations. After that comes the blackboard. "Would you wear this claimant's artificial leg for five dollars a day?" "Would you take over his headache for 30 cents an hour?" Then you add his life expectancy in terms of days or hours and the jumbo verdict is in the making.

In malpractice cases, the defense lawyer often finds it inadvisable to take a case into court because of the sympathetic appeal of the plaintiff's injuries. Thus the deformities of the birth-injured child are likely to have strong appeal to the jury, although they don't prove anything so far as alleged malpractice is concerned. The plaintiff strengthens his case if he comes to court on crutches or in a wheel chair, if he has lost a leg, or if he has ugly scars. The patient's appearance does not prove that the doctor is at fault, but they prompt the defendant's lawyer to keep the case out of court.

Now what are the doctor's chances of being sued for malpractice? In Colorado they are one in 70. In other words, a doctor might practice 70 years before encountering a malpractice claim. On the other hand, one or two of our doctors have accounted for two claims in a year. In California their chance of being sued is much greater. It's one in 28; in New York it's one in 25. I don't think that this means that our doctors are so much better in Colorado than they are elsewhere. It may perhaps imply that Colorado lawyers have a higher social conscience, yet the hazards of malpractice are real. You can be sued by a newborn child, *when he becomes of age*, for an alleged birth injury. You can be sued after you are dead, for your estate can be sued. A doctor recently died and left his wife with two suits in which he was alleged

to have tied off the common bile duct. One has been settled out of court and the other one is still pending. But the hazard is very real. You can be sued for mistakes made by nurses and hospital employees who are taking care of your patients. The doctor is in the position of the captain of a ship and is responsible for everything that happens.

Responsibility for employees

Let me cite three cases where the employees or the agents were at fault. In a Catholic hospital, the sisters in charge of the operating room were in retreat. They left the operating room in charge of two inexperienced orderlies. When the patient was wheeled in, the doctor was in the scrub-room and he called in to "strap the patient." They were green and did not know about the straps that were attached to the bottom of the table, and ran off to find straps. The patient fell off the table and afterward sued the doctor because he had chronic headaches. He was awarded \$10,500, and that verdict stood up in the Supreme Court! It was appealed and the doctor had no recourse. He just had to pay the \$10,500.

Apart from personal injury, many malpractice claims are expressions of resentment. A New York survey showed that 53 per cent of the claims arose from resentment occasioned by such things as high fees and high collection pressures. Many patients resented what they called the doctor's apparent indifference and inattention. A thousand families were interrogated about their doctors. This survey showed that 51 per cent of the families resented the doctor's unwillingness to make house calls and 41 per cent resented long periods of waiting in the doctor's office. Bear in mind also that "abandonment" is sometimes the cause of misunderstandings. It is abandonment if the patient is already under the doctor's care and he cannot be reached and there is no good and sufficient reason for his absence.

In some complaints we identify the effect of sociologic changes. The x-ray, the cardiograph, the laboratory, have become part of the doctor's equipment. They improve medical care, but they add to the patient's expense, and they also make the doctor appear to be impersonal. Thus, our relationships in most walks of life are less personal than

they were a generation ago. There are other sociologic changes which add to the doctor's problems. The city has run off into the country and it is physically impossible for the doctor to make a lot of distant house calls. Moreover, the doctor frequently needs the facilities of his office or a hospital to establish a diagnosis and to determine effective treatment. But people are egocentric when they are sick and they want the best of his personal service.

Failure to communicate

Actually one of the principal causes of misunderstanding leading to malpractice claims is the failure to communicate. Nowadays the speech departments of universities pay almost no attention to oratory, but they pay much attention to effective communication. Henry LaBouche, the editor of "Truth," was reading proof and he ran across a passage which appeared libelous. He took a pen and scratched it out. He didn't communicate because it was poor scratching and when the printer got it he thought it was *underlined* so he put it in italic print! There was nothing to do but pay up! Failure to communicate is a common occurrence in a doctor's world. Verbal orders may be misunderstood and written orders misinterpreted. In the matter of malpractice claims in Colorado we find that two-thirds of the alleged torts or errors occur in hospitals, and this is the place where communication plays an important part. The doctor communicates with a team — with nurses, orderlies, and interns—and his instructions must be made unmistakably clear. When he asks for Mrs. Smith to be sent to the operating room, it should be "Mrs. Edna Smith in room 243." There may, obviously, be other Mrs. Smiths in the hospital. There may even be two in the same four-bed room. One doctor *thought* the wrong boy had been brought to surgery, so he asked the lad "Are you Fred?" The boy thought the doctor asked "Are you afraid?" and he answered "Yes." Thus, the wrong boy got the operation and the doctor got the lawsuit. Verbal orders are treacherous, and it is well to avoid them. When orders are written they must be clear and there must be no mistake. So have your orders read back and reduce the chance of error.

Now we come to the *legal* substance of

the patient's claims. What has the doctor done that has prompted a patient to sue? The most common recurring claim, probably, is burns—from hot water bottles, heat lamps, cradles, chemicals, occasionally ether. There again is your "agent"; you don't do it yourself, but the nurse leaves it on too long or gets the thing too close. A second common recurring cause of complaints involves amputations. It may look all right to the patient to have her foot amputated when it's badly crushed. The vessels are torn and the nerves are torn to pieces, but six weeks later she can visualize that foot as it was before, when it was a normal foot. So amputations are a common cause of malpractice claims. Any mishap that calls for secondary surgery means added expense, probably more pain or frustration. So anything that calls for secondary surgery is likely to call for a lawsuit. Stillbirths are a common cause of malpractice claims, especially if the doctor was late in arriving. Sponges left in the abdomen or in the vagina may cause the doctor to be sued. Injury to the ureter, whether cutting the ureter where there are many adhesions is malpractice or a normal surgical accident, results in lawsuits.

Loss of teeth during tonsillectomy occasions many malpractice suits. In one case the tooth wasn't found for six weeks but was in the tonsillar fossa, but it led to a law suit. Regarding mental patients, it is indiscrete to certify before the judge that a patient is insane. One doctor did that once, without even seeing the patient. He had no defense at all. But having seen the patient, you can write something cautiously like "I wish to certify that Mr. X appears to be mentally ill and I recommend that he be examined by a mental health commission in order that his condition and his need for mental treatment may be legally determined." Then you haven't put yourself in trouble, you've said all that need be said, you've asked the judge to appoint a commission and you have not laid yourself open to suit. Penicillin deaths and reactions have occurred in the last few years, making penicillin red hot legally. Amputation of the breast in which a tumor was found to be benign, a needle broken in the perineum and the patient not informed, a tight cast with injuries to the foot, vasectomy in which the wife had not given her

consent! She gave her consent, she thought, to a circumcision, but actually she signed the consent to a vasectomy. The verdict was \$38,000. Fortunately that was thrown out by the Supreme Court, and the case was settled out of court for \$3,500. In a sterilizing operation you always need consent of both husband and wife. Failure to diagnose pregnancy has led to lawsuits.

There was a case where a doctor gave a patient a hypo. The patient was standing up, fainted, fell and broke a couple of teeth. He should have been sitting or lying down. A surgeon was to perform a right oophorectomy and he asked the surgical nurse, "Has consent to surgery been signed?" She looked at the record and said "Yes." He went ahead and removed both ovaries because both were diseased, but the consent said "right ovary only." The doctor won that case in court but it caused him a lot of anguish before he got through with it.

A doctor prescribed 24 sedative capsules for a patient who was leaving town. Instead of leaving town he left the earth by taking all of those capsules at one time and the doctor was sued. He wasn't out of line, but the family's resentment was there as you can well see. A doctor testified in court that a patient was mentally ill. He was sued for that. Pregnancy occurred after a sterilizing operation; again, a lawsuit. A housewife fell off a low stool in the kitchen and sprained her ankle. She asked the doctor to have an x-ray taken which he declined. The ankle did not improve. She changed doctors, and the second doctor had an x-ray film taken showing a fracture of the os calcis. There is not much defense in that case; it would have been so easy to say "Yes."

How to protect yourself

What to do if threatened by a suit: The principal thing is not to panic. Don't blindly admit or assent fault, for you may not be to blame. Be sympathetic with the patient, but don't quarrel with him. Notify your insurance carrier, not your personal attorney, because you have already paid for legal services. Notify your State Society and they will send you printed forms on which you can report the nature of the claim, and they will help you in handling it. Put nothing into writing for the patient or his attorney, but

ask the patient's attorney to put his complaint into writing so that everything will be clear. Admitting you have liability insurance invites a larger claim. Actually there may be no malpractice even though you are not satisfied and the patient is not satisfied with the results, especially with fractures. The law merely requires that you conform to the practice in your community. It doesn't expect you to be an all-around specialist and under the law the doctor is not a warrantor of cures. That beautiful phrase comes from William Howard Taft, when he was on the United States Supreme Court. "A doctor is not a warrantor of cures; he's expected to do his best for the patient and hasten his recovery, do everything possible, but he doesn't warrant a cure." With respect to suits, don't gag if you are sued for \$500,000. That's often a bluff, and \$5,000 is what they're really after. When you have to testify in court, testify to the facts and use simple English that the jury can understand. Try to remain at least as calm as the attorneys. It is not easy to prove a malpractice claim in court. It requires expert testimony. The plaintiff can't always obtain that, especially where the claim is a very dubious one.

Avoid malpractice

Of course, avoid malpractice. Use the diagnostic aids the case calls for, and consultation when you need it or if the patient seems dissatisfied or calls for it. You don't have to accept an undesirable patient, but if you do accept him you are responsible for his care. If he's a ne'er-do-well and a deadbeat with a bad social record you may decline to accept him as your patient. If a patient is critical, complaining, dissatisfied, suggest that he change doctors. When he is recovered, you are not obliged to take him again for treatment. Avoid loose talk socially. If friends ask you a professional question the chances are they have some particular case in mind, and you may be quoted. Talkative secretaries sometimes cause harm. They should be advised to avoid names over the phone. Then, of course, don't give opinions about other doctors' treatments. Avoid poor relations with other doctors in town. A significant percent of malpractice claims start from professional criticism. It is easy to criticize a bad laparotomy scar, but we don't know the

facts. The patient may have been delirious and pulled off the dressings and infected the scar; many circumstances may leave the doctor entirely blameless. In general, follow the Golden Rule. A kindly comment is most assuring to a patient. "That's a neat surgical scar" or "That's a nice tonsillectomy" gives the patient confidence in his former doctor—and often in you. A doctor's condemnation of a colleague is a cardinal sin, a sin which brings its own retribution. If you condemn a colleague to a dissatisfied patient you may be called as a principal witness if he decides to sue. In avoiding malpractice claims, avoid misunderstandings over fees and charges. Discuss the cost of an operation, the cost of hospital charges, the cost of x-ray work, laboratory work and any other probable expenses. A survey in New York showed that 23 per cent of suits resulted from disputes over bills. That's an important point. The statute of limitations for collection runs in Colorado for six years; for malpractice, two years—that is, two years after the patient discovers the alleged malpractice. But in general it leaves you a margin of four years, and it is wrong to be too hasty about suing a disgruntled patient for a bill. Anyhow, you don't collect much that way! Your office nurse should not be permitted to practice medicine in your absence, as administering injections or applying physical therapy, for you are responsible for everything she does. If she brings you a hypo, have her bring you the empty ampule also. Before using penicillin, be sure to inquire regarding sensitivity. For your own personal protection and safety of patients, use only written orders and do not take other people's actions for granted. Verbal orders are always risky, and this is especially true of telephoned orders. Write them clearly so "grain," for instance, is not mistaken "gram." They still tell in Memphis of a doctor who used to sign his hospital orders with his initial, SSE. So many patients got soap-sud enemas that he had to change his technic. You can close many loopholes by using protective notes. "Patient re-

fused consultation"; "patient refused x-ray examination because of expense"; "failed to keep appointment." In a large cancer clinic, 30 per cent of the patients fail to keep their second appointment. If a patient fails to keep an appointment, put that on the record in detail: "Did not return for removal of cast"; "missed postpartum examination," for example. You may see fit to add that the patient was contacted by telephone. If it is important that the patient return, write him and keep a carbon copy of the letter in your files. Your written notes really stand up in court. If you testify merely through memory you may be telling the whole truth, but the jury may think your memory is convenient. If you have an error in your notes strike it out lightly and above it or in the margin write the correction, then add your initials and date. Don't erase an error, for there a lot of controversy can arise in court. Many a malpractice claim has been lost by a doctor because he didn't have sufficient notes. A nurse's notes or your own notes, if adequate, can save a lawsuit.

How much insurance to carry? We used to talk about \$5,000 and \$10,000 limits. That isn't adequate at the present time; one should not carry less than \$25,000-\$75,000, which means \$25,000 for an individual claim or \$75,000 for the period of the policy, usually one year. That costs an anesthesiologist or surgeon about \$201 a year; a generalist or internist, about \$84 for the same coverage.

Summary

Don't oversell yourself to your patients. Identify and close all loopholes. Use protective notes in your hospital work and your office practice. Make sure your orders to nurses and instructions to patients are clearly understood. Observe the art as well as the science of practice. Avoid the ivory tower reserve. Remember that patients have feelings, feelings that may turn to resentment, and resentments may turn to lawsuits! •

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Hypertension due to stenosis of the renal artery*

William R. Coppinger, M.D., Fernando David, M.D., and Thomas C. Green, M.D., Denver

Brief review of one of the surgically treatable causes of hypertension with an appropriate case report.

HYPERTENSION, with its deleterious effects, remains a major medical problem despite the growing list of antihypertensive drugs. The exact etiology of essential hypertension has not as yet been established. However, a minority of hypertensive cases have a demonstrable cause such as pheochromocytoma, Cushing's disease, hyperaldosteronism and pyelonephritis. In 1934, Goldblatt¹ firmly established that experimental hypertension could be caused by unilateral renal ischemia. Unilateral renal disease as a cause of hypertension was first noted in 1937 by Butler² due to unilateral pyelonephritis and normotension was re-established by nephrectomy. In a brief period of time large numbers of nephrectomies were done with disappointing results and the initial enthusiasm waned. Howard³ recreated an interest with a report of five cases of unilateral renal artery stenosis or obstruction producing hypertension and cured by nephrectomy. Superior diagnostic tests were devised by Howard and he drew attention to the value of aortography.

Causes of stenosis

Although renal artery disease undoubtedly accounts for only a minority of cases of hypertension, its recognition is important

as definitive treatment may be possible. Various conditions may produce renal stenosis or obstruction. Arteriosclerosis is the most frequent cause and, as in other vessels, is commonly located near the origin of the artery⁴. Other intrinsic causes of luminal narrowing are thrombosis, embolism, congenital or acquired stenosis, aortic coarctation at the renal level, aneurysm and thromboangiitis⁵. Extrinsic causes are external pressure by aberrant vessels, congenital bands, tumors and aneurysms. Kinking and torsion, especially due to traumatic fibrous tissue reaction, may occur. The true incidence of these lesions is not known but Poutasse and Sutton, utilizing aortography, found 83 cases in the investigation of 317 hypertensive patients⁶.

Aortography case selection

Since aortography is not devoid of hazards, it is obvious that not all hypertensive patients should be submitted to this diagnostic procedure. The following criteria are useful in the selection of cases to be thoroughly investigated^{6, 7}:

1. Patients showing a disparity of size or function in one kidney by intravenous urograms.
2. Hypertensive patients under age 35.
3. Sudden onset of hypertension at any age.
4. Onset of hypertension after an attack of flank pain.
5. Malignant hypertension.
6. Hypertension with documented onset after age 50.

The physical examination is not particularly helpful though the diastolic pressure

*Presented at the 25th Annual Midwinter Clinical Session of the Colorado State Medical Society, February 18, 1960, Denver. From Clinic Service of St. Joseph's Hospital, Denver, Colorado. Dr. David is Chief Resident in Surgery, St. Joseph's Hospital, Denver, Colorado. Dr. Green is Chief Resident in Medicine, St. Joseph's Hospital, Denver, Colorado.

will usually be 110 mgm. Hg. or over. Any bruit heard in the upper abdomen should arouse suspicion as it is indicative of arterial stenosis. The fundi show the hypertensive retinopathy consistent with the degree and duration of the elevated pressure. Urinalysis may be normal or reveal the presence of albumin and/or red cells and casts. Nitrogen retention usually is not present and the P.S.P. and creatinine clearance tests may be normal. However, reduced water and sodium excretion from the affected side are characteristic³. Brust and Ferris⁴ have described the tetraethylammonium chloride test which gives a definite pattern in renal artery stenosis. When 400 mgms. of T.E.A.C. are given rapidly intravenously, the blood pressure remains constant or shows a pressor response whereas renal parenchymal or essential hypertension manifest a marked depressor response.

Aortography is the most reliable method for demonstrating renal artery stenosis or obstruction. In most cases the constricted area will be shown. Should this not be seen, almost invariably, there will be a striking poststenotic dilatation which is confirmative. The use of the more recent contrast agents have markedly decreased the incidence of complications and aortography is a relatively safe procedure.

Treatment

The ideal treatment is predicated on the corrections of the basic pathologic process without the sacrifice of good function. It has been demonstrated⁵ that ischemic kidneys producing hypertension show tubular atrophy and some interstitial fibrosis. Furthermore, the involved kidney usually does not develop arteriolosclerosis but the "good kidney" will develop an arteriolosclerosis consistent with the degree and duration of the hypertension. From these facts would it not seem appropriate to revascularize the ischemic kidney, especially if the hypertension was of a considerable duration? Several methods are available and the choice depends upon the existing condition. An artery partially occluded by an atherosclerotic plaque is best treated by thrombo-endarterectomy. If the obstruction is lengthy and poststenotic dilatation present, a by-pass prothesis or

arterial autograft may be utilized^{6,7}. Occasionally, excision and graft replacement may be used. If complete obstruction of the renal artery exists, nephrectomy must be done. In numerous cases reported, the results have been gratifying, restoring blood pressure to normotensive levels if the hypertension was of short duration. In long standing hypertensives, a marked reduction of blood pressure was usually obtained but not to normal levels. However, these cases often became responsive to antihypertensive drugs.

CASE REPORT

A 31-year-old white female was admitted to the hospital September 7, 1959, with the complaint of headaches. During the previous two months she had noted moderately severe headaches and constant fatigue. At the onset a mild urinary tract infection occurred and responded promptly to antibiotics. A retrograde pyelogram was reported as being negative.

Past history was significant in that the patient had had scarlet fever as a child. During a normal pregnancy, at age 18, a questionable urinary tract infection occurred. A total hysterectomy and bilateral salpingo-oophorectomy was done at the age of 21. One year ago, patient developed a gastrointestinal infection, at which time a systolic blood pressure of 190 mm. Hg. was noted. This promptly returned to normal after a short course of antihypertensive drugs.

Physical examination showed a well-developed white female in no acute distress. Blood pressure was 240/100 and pulse 76 with regular rhythm. Other than an accentuated aortic second sound, the heart was normal. A retinal examination revealed arteriolar changes of hypertension. Cotton wool patches were present and believed to be toxic in origin, as there was insufficient focal constrictions to account for them on an angiostatic basis.

An intravenous pyelogram showed a ptosis of

BLOOD TESTS

Hemoglobin	15 gm.
W.B.C.	8,550
Blood Urea Nitrogen	13.6 Mgm. %
Creatinine	0.3 Mgm. %
Total Proteins	7.6 gms.
Albumen	4.7 gms.
Globulin	2.9 gms.
A/G ratio	1.6/1
Potassium	5.3 mEq.
Sodium	138 mEq.
Chlorides	103 mEq.
CO ₂	23.7 mEq.
Regitine Test	Negative

URINARY TESTS

Urinalysis	
S.G.	1.021
Albumen	+3
R.B.C.	6-8
P.S.P. Excretion	18.1%—15 min. 26.4%—60 min.
Repeated Cultures	No growth
24-Hour Protein	0.92 gm.
24-Hour Catecholamines	Negative
24-Hour 5-HIAA	Negative

DIFFERENTIAL RENAL FUNCTION TESTS

	Left	Right
Sodium Clearance	610 mEq./L	460 mEq./L
P.S.P.	19.4%	13.5
Water Clearance		
Ratio	3	1

the right kidney which is smaller than the left, but no other abnormality was noted. A retrograde pyelogram showed minimum blunting of the minor calyces bilaterally, consistent with a mild recurrent infection or calyceal atrophy of occlusive arterial disease.

During the preoperative period the blood pressure remained elevated though considerable fluctuation was present (Chart 1). A T.E.A.C. test

Chart 1

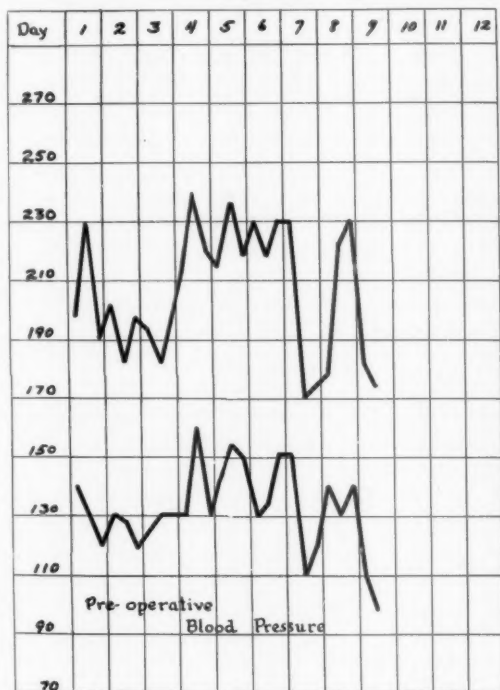


Chart 2

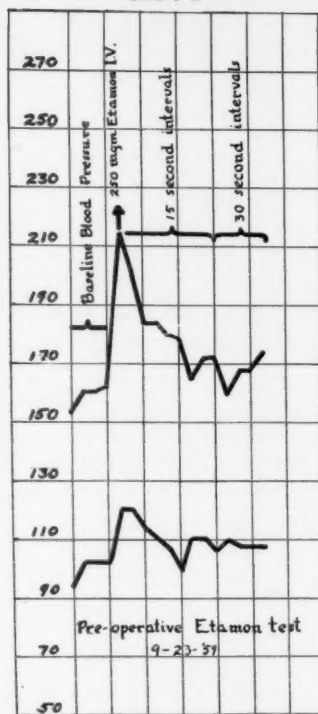


Fig. 1. Translumbar aortogram.



Fig. 2. Exploration of renal artery.

produced pressure changes consistent with renal artery hypertension (Chart 2). A translumbar aortogram September 16th revealed a stenosis of the right renal artery just proximal to the bifurcation and definite dilations in either branch (Fig. 1).

On September 25, 1959, the right renal artery was explored. A definite constriction was found extending into the bifurcation with poststenotic dilatation (Fig. 2). An arterioplasty with the patch technic was unsuccessful due to the small caliber of the vessels and a nephrectomy was done. The blood pressure dropped to normal levels by the third postoperative day and remained at 130-148/80-90 mm. Hg.

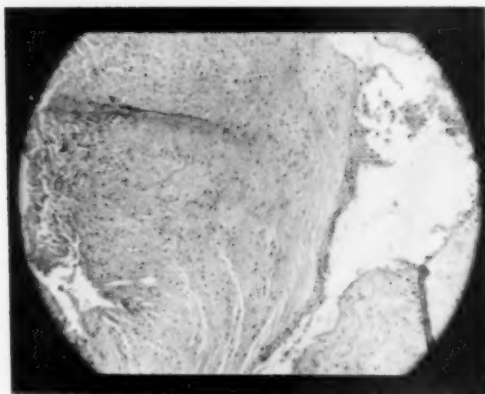
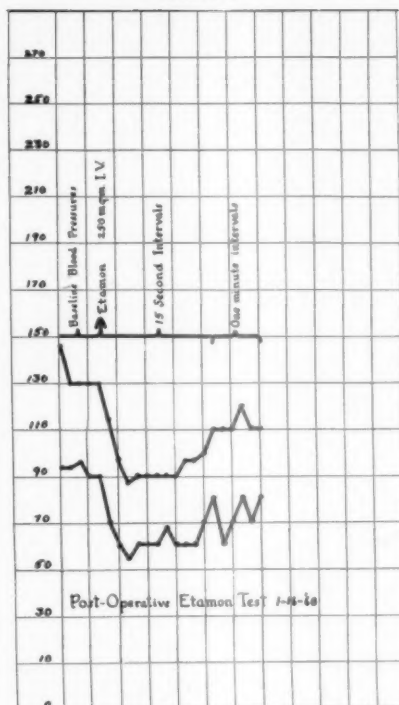


Fig. 3. Note the subintimal fibrosis.

The microscopic diagnosis of the removed kidney was: stenosis of the renal artery, probably due to arteriosclerosis (Fig. 3). A minimal thickening of the arterioles was present. The glomerular and tubular structures were normal.

Three months later the N.P.N. is 15 mgm. per cent. One plus albuminuria persists but RBC's are not present and the patient has remained free of headaches. The blood pressure response to T.E.A.C. has returned to normal (Chart 3).

Chart 3



Comment

This case illustrates hypertension caused by renal artery stenosis. A definite arterioplastic procedure was not possible due to the location of the lesion but, with the short duration of the hypertension, a good result can be anticipated.

From the foregoing facts presented, it seems worthy of mention to encourage physicians to be aware of the possibility of renal artery disease causing hypertension and utilize the diagnostic aids now available.

Summary

1. A brief resume of renal artery hypertension with the indications for diagnostic studies is reviewed.
2. The various causes of renal artery stenosis are given.
3. Early recognition and treatment before arteriolar disease develops in the contralateral kidney occurs is emphasized.
4. The available methods of definitive treatment are discussed.
5. A case report is presented. •

references on next page

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Functional problems related to the biliary tract

Frank B. McGlone, M.D., and Donald R. Robertson, M.D., Denver

Research studies of bile flow, viscosity and ductal pressures under the influence of various drugs give us insight into the physiology of the biliary system.

FUNCTIONAL ABNORMALITIES of the biliary tract have been indicted as the cause of a variety of symptoms in patients for years. Most of the evidence supporting or opposing this viewpoint has been obtained by clinical evaluation. Patients who have had surgical procedures on the biliary tract followed by "dyspepsia" have been given various kinds of medication hoping to improve the function of the biliary tract and alleviate symptoms. From clinical observation alone it is difficult to separate the psychogenic from the physiologic response to drugs. The purpose of this paper is to present some objective findings in relation to the effect of drugs on bile flow and biliary tract pressures.

The term biliary dyskinesia is usually used to describe a set of symptoms due to dysfunction in the biliary tract. Patients who suffer from right upper quadrant pain of unknown origin are often told they have this

condition. Although biliary dyskinesia may vary in meaning, depending upon the person using the term, it generally relates to dysfunction of any part of the biliary system including the collecting ducts, common duct, gallbladder, sphincter of Oddi and its entrance into the duodenum at the Ampulla of Vater. It is assumed by some that biliary dyskinesia infers a lack of coordination between the contractions of the gallbladder, the common duct, the collecting ducts and the sphincter of Oddi. Lack of coordination may give rise to symptomatology for which, unfortunately, we have no objective measurement. There is some confusion regarding the exact structure of the common duct and its physiology. Little is known about the coordination of pressures within the common duct and the gallbladder, as well as the mechanism which opens the sphincter.

In an effort to clarify the clinical significance of functional biliary tract disorders, pressure and volume studies were made on the biliary tract of human patients. Patients who had undergone surgery on the biliary tract, including exploration of the common ducts resulting in T-tubes being placed in the ducts, were carefully studied. In general, patients were selected who had no other

known pathology of their biliary or digestive tracts. Patients were not on any drug therapy and had no known drug sensitivity. In addition, two patients with surgically proven carcinoma of the pancreas and complete obstruction of the common duct, as well as three patients who had had previous sphincterotomies, were also studied.

Pressure studies were obtained by attaching T-tubes to a simple upright glass manometer by means of rubber tubing. The zero reading was set at the approximate level of the common duct as the patients lay supine in bed. With this apparatus connected, the manometer was filled with saline to include the connecting tube and the T-tube until the level of saline was just short of that necessary to cause a sudden lysing of the pressure. When lysing occurs, this indicates opening of the sphincter of Oddi and allows flushing of saline into the duodenum. This phenomenon was substantiated by putting a Rhexus tube into the duodenum under fluoroscopic control, coloring the saline with a purple dye, and connecting the Rhexus tube to a constant suction apparatus. When the pressure lysed in the common duct manometer, the purple colored saline was returned by means of the tube in the duodenum. By this technic we derived the term "common duct pressure" which will be used in the rest of this paper. The pressure, as expressed in millimeters of saline shown on the manometer attached to the common duct T-tube, is the amount necessary to cause a sudden lysing of pressure and opening of the sphincter of Oddi*.

Normal common duct pressures have been considered to vary from 100 to 130 millimeters of saline under stable conditions. Sixty-seven patients were tested and their common duct pressures measured. After studying several patients, it became apparent that some showed day to day variations of pressure as high as 10-30 millimeters of saline. In certain patients psychological stimulation would produce definite effects upon common duct pressures. The effect of drugs was studied in only those patients in whom there was little variation in pressure, regardless of environment. It is interesting to note that none of the patients with stable common

duct pressures were found to show any appreciable lability after frequent studies.

The following studies were accomplished:

A. The T-tube was attached to a manometer filled with saline and the common duct pressure determined and recorded. Following this, the pressure was raised to a point just below that which would open the sphincter. It was maintained at that level. The effects of the following drugs were studied and pressures recorded every 10 minutes up to 75 minutes in each instance.

1. Atropine sulphate, gr. 1/50, intramuscularly.
2. Morphine sulphate, gr. 1/4, intramuscularly.
3. G-3012, 100 mgs. orally (Geigy Netrin).
4. Morphine sulphate, gr. 1/4 and atropine sulphate, gr. 1/50, intramuscularly.
5. Morphine sulphate, gr. 1/4 and G-3012, 100 mgs., intramuscularly. The results of these pressure studies will be seen in the following tables.

TABLE 1
Common duct pressure in millimeters of saline

a) Total number of patients tested.....	67
b) Patients with stable readings.....	50
c) Range	
Low	42 mm saline
High	135 mm saline
Average	87 mm saline

TABLE 2
Effect of morphine sulphate on common duct pressures

a) Number of patients tested—14	
b) Dose and route 1/4 gr intramuscular	
c) Onset of action 10-15 minutes	
d) Peak action 30-40 minutes	
e) Result—increased common duct pressures	
f) Range	
Low	38% increase
High	130% increase
Average	75% increase
g) Side effects—right upper quadrant discomfort in 10-15 per cent	

*This experimental work was supported in part by a grant from F. D. Searle and Geigy Chemical Company.

TABLE 3

Effect of atropine sulphate in common duct pressures

- a) Number of patients tested—12
- b) Dose and route—1/50 gr intramuscular
- c) Onset of action—too slight to determine
- d) Peak of action—too slight to determine
- e) Result—no significant change
- f) Range

Low	3% increase
High	4% increase
Average	1-2% decrease
- g) Side effects—moderate to marked dryness of mouth and blurring of vision in all patients

TABLE 4

Effect of G-3012 on common duct pressures

- a) Number of patients tested—20
- b) Dose and route—100 mgm orally
- c) Onset of action 30-40 minutes
- d) Peak action 75-90 minutes
- e) Result—decrease in common duct pressures
- f) Range

Low	16% decrease
High	42% decrease
Average	25% decrease
- g) Side effects—none

TABLE 5

Effect of morphine sulphate and atropine sulphate on common duct pressures when given simultaneously

- a) Number of patients tested—11
- b) Dose and route
 - 1) Morphine sulphate ¼ gr intramuscular
 - 2) Atropine sulphate 1/50 gr intramuscular
- c) Onset of action 10-15 minutes
- d) Peak of action 30-40 minutes
- e) Result—no change from morphine sulphate alone
- f) Range

Low	50% increase
High	122% increase
Average	73% increase
- g) Side effects—all patients had moderate to marked degree of dryness of mouth and blurring of vision

TABLE 6

Effect of morphine sulphate and G-3012 on common duct pressures when given together

- a) Number of patients tested—18
- b) Dose and route
 - 1) G-3012—100 mgm orally
 - 2) Morphine sulphate ¼ gr intramuscular 30 minutes after G-3012

Note: So as to get action peaks together
- c) Onset of action 10-15 minutes
- d) Peak action 30-40 minutes
- e) Range

Low	27% increase
High	58% increase
Average	39% increase

Note: Average increase with morphine alone was 75% increase
- f) Side effects—none

TABLE 8

Common duct pressures in post sphincterotomy patients

- a) Number of patients tested—3
- b) Common duct pressures
 - 1) 65 mm 9 days postoperative
 - 2) 85 mm 3 days postoperative
 - 3) 97 mm 2 days postoperative
- c) Common duct pressures after morphine sulphate
 - 1) 88 mm—37% increase
 - 2) 102 mm—20% increase
 - 3) 129 mm—33% increase

Other drugs were given to patients with stabilized common duct pressures and readings were recorded every 10 minutes to 75 minutes. Although these drugs were not given in a statistically significant number of patients to be of more than passing interest, yet they do present some interesting data. The drugs were as follows: Acetylcholine, Octine, Banthine, nitroglycerine and Demerol. The results of the administration of these drugs and the effect on common duct pressures will be seen in Table 7, page 46.

Significant cases

The following observations are of special interest in connection with our study.

1. One 50-year-old white female, who had

continued on page 46

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The anti-inflammatory and antipruritic efficacy of triamcinolone acetonide was shown by the prompt control of itching and resolution of affected areas. Cahn, M. M., and Levy, E. J.: A Comparison of Topical Corticosteroids: Triamcinolone Acetonide, Prednisolone, Fluorometholone, and Hydrocortisone.

Antibiotic Med. & Clin. Ther. 6:734 [Dec.] 1959.

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Precautions:
Contraindicated
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Each gram contains:
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simplex. Sensitivity reactions
to neomycin occasionally occur.



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TABLE 7
Effect of miscellaneous drugs in common duct pressures

Drug	Patients	Dose	Effect	Side effects
Banthine	4	100 mgm P.O.	+5% increase	Dryness of mouth Blurring of vision
Urocholine	3	25 mgm P.O.	12-15% increase	None
Demerol	2	100 mgm P.O.	3% increase	None
Nitroglycerine	5	1/200 gr I.M.	Average 51% decrease	Marked headaches in all patients
Octin	2	1 amp I.M.	Increase	None

a previous sphincterectomy, also had many functional complaints involving the gastrointestinal tract. At surgery her common bile duct was found to be remarkably well developed, so muscular and so forceful in contractions that the placing of a normally sized T-tube in the duct was difficult due to visible spasm. Following the insertion of the T-tube which took much trouble and much time, she was found to have one of the most labile common duct pressures of all patients studied. Deliberate attempts to disturb this patient led to 100 per cent plus increase in common duct pressures repeatedly.

2. Morphine sulphate in doses of $\frac{1}{4}$ gr. intramuscularly caused pressure elevation in all patients included in the study. However, there was one patient who had undergone a previous splanchnicectomy in whom the pressure regularly dropped in the common duct following intramuscular morphine after it had been raised by psychic stimulation.

3. Another patient who developed considerable pain in the liver area following psychic elevation of the common duct pressure would feel no pain and become almost euphoric soon after a large dose of morphine was given intramuscularly. This occurred in spite of the fact that the pressure in the manometer was considerably greater than that caused by psychic stimulation which had given him actual pain.

4. In two patients who had complete obstruction of the common duct secondary to proved carcinoma of the head of the pancreas, the common duct pressure could be raised to the limit by liver pain just by adding saline to the manometric system and forcing it up into the liver radicals. Morphine sulphate, shortly after injection, caused pain

by apparent contraction and elevation of pressure.

5. One patient, whose pressure readings were unstable, was found to have little change in ductal pressures when given morphine or nitroglycerine. At surgery a large dilated aberrant cystic duct was found. This was apparently functioning either as a secondary gallbladder or by aiding in regulating pressure in the system.

Volume studies

An additional study was made to determine volume of bile flow under varying situations and the effect of various drugs on bile flow and on bile constituency. In 30 patients, gross studies related to volume, appearance, color and sediment were carried out as follows:

In bed patients, three hourly specimens were collected daily during a rest period in the afternoon beginning one hour after lunch. Only those patients were used who had a uniform bile flow on three successive days. These patients were then given Zanchol*, four tablets daily. The following chart (Fig. 1) shows the effect in 19 patients whose volume flow seemed stable prior to drug administration.

Two patients with carcinoma of the head of the pancreas and complete obstruction of the common duct had T-tubes inserted for relief of jaundice. In these patients the volume studies were quite similar to those reported above.

Patient H. B., aged 57, had bile volume averaging 90 cc. without Zanchol over a three-hour period. After 48 hours with four

*G. D. Searle preparation.

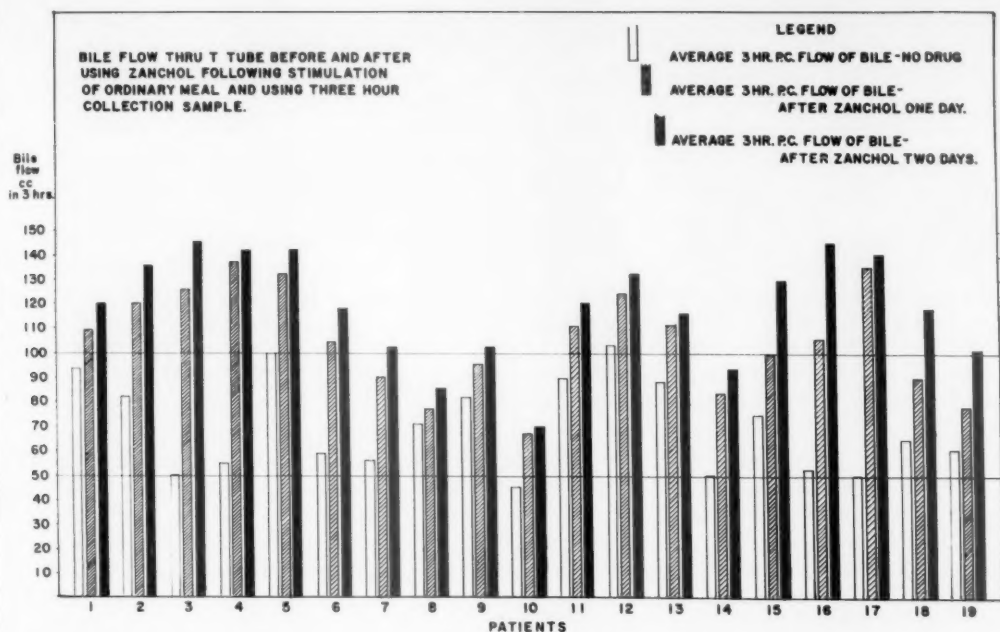


Fig. 1

tablets per day, the average volume was 120 cc. and remained so while on medication.

Patient A. H. was a 68-year-old female treated for complete biliary obstruction due to carcinoma—with T-tube drainage. Her average flow was 70 cc. but jumped to 160 cc. average after Zanchol.

Chemical analyses

Detailed chemical* and physico-chemical studies of bile were made on 24-hour specimens of bile obtained from six patients. Six separate studies were made on one patient with bile obtained every third day over an 18-day period. Study included percentage of total solids, percentage of water, specific gravity, viscosity (using Ostwald viscometer), color index, electrolytes (sodium-potassium) CO₂ mEq./L chlorides mEq./L, bilirubin, cholesterol, cholic acid and desoxycholic acid.

Statically and by detailed chemical analysis the changes that were consistent were increase in volume of bile and decreased viscosity. In addition, the gross appearance of the bile after administration of Zanchol was always that of a clear light green liquid

with no sediment. In fact, whenever sediment had collected in the tubing, Zanchol resulted in its elimination. The detailed chemical analyses of the bile did not produce any consistent changes of significance. Of interest, however, is the fact that lowering of viscosity and increase in conjugated bile acids along with decrease in cholesterol and cholic acid output was noted. Further studies are indicated in order to determine various factors that influence the composition of bile in health and disease.

Use of Zanchol

Along with the studies reported above, a large number of patients with a variety of possible biliary tract complaints were treated with Zanchol alone or in conjunction with other drugs. Records are available in 129 patients treated for periods of one month to five years with two to six tablets daily. The clinical conditions treated were chiefly those related to disturbances of the biliary tract. However, many patients had functional symptomatology and disturbances elsewhere in the GI tract which undoubtedly contributed to their complaints. The most consistent clinical improvement was seen in patients with some objective evidence of disturbance

*Performed by Lawrence C. Kier, P.H.D.

of bile flow. These included post-cholecystectomy cases and two patients with biliary cirrhosis who had undergone multiple surgical procedures on the biliary tract.

In order to further check on the efficacy of Zanchol therapy, placebos were given to 30 patients using a "double blind method" of administration. The patients who noticed a return of symptoms while taking placebos were, in most instances, those who had definite evidence of disease of the biliary tract. Ten of 14 patients placed on placebos were in the latter category. Twelve of 16 patients placed on placebos without objective evidence of pathology noticed no change on placebo administration.

No toxic or significant side effects were noted with Zanchol. A few (10/129) patients noted nausea which disappeared with reduced dosage. A mild diarrhea was a problem in only six of 129 patients. Liver function studies have been continued at six-month intervals on six patients who have taken the drug in amounts up to three tablets daily for two to five years. B.S.P., thymol turbidity, prothrombin time, serum protein and A/G ratios were not altered significantly in any patient. Several patients with B.S.P. retention of significant degree have shown objective improvement on serial studies while taking Zanchol.

Discussion

These studies have demonstrated the variation in bile flow and the variability of common bile duct contractions in various types of patients. In response to various drugs noted above, pressure reactions in the common duct are fairly constant but not entirely uniform. Variations in response may be due to differences in the physical structure of the bile ducts or to variations in innervation similar to that in the esophagus.

One patient who had a previous splanch-nicectomy had labile ductal pressures and an unusual response to drugs. The flow of bile in response to cholerectic drugs is apparently quite uniform in all patients studied. We found that morphine quite uniformly increased common bile duct pressure. Anti-cholinergic drugs such as atropine and Ban-thine did not significantly lessen ductal pressure nor did they block the effects of mor-

phine in increasing pressures. Drugs acting directly on smooth muscle such as the nitrites are more effective than the blocking agents in lowering ductal pressures.

Many unusual responses of the biliary tract were noted in relation to various types of stimulation. These variable responses may be due to anatomic or physiologic variations. There are probably many unknown mechanisms that serve to modify the response of the common duct to the flow of bile and to drug administration in health and disease. In the presence of physical narrowing or physiologic spasm of the common bile duct with obstructive phenomena, consistency of bile becomes a factor of definite importance. Our evidence had shown that cholerectic drugs, particularly Zanchol, increase the volume, decrease viscosity and decrease sediment in bile. Such changes are definitely beneficial. Our clinical trial of Zanchol supports these observations. However, clinical observations in relation to biliary tract symptomatology are difficult to document.

Summary

1. Biliary tract or common duct pressures seem to be a composite of the tone and reaction of the common duct, sphincter of Oddi, the duodenum and the gallbladder itself.

2. Pressures within the biliary system can be highly variable in certain individuals and quite stable in others.

3. It has been demonstrated that these pressures are susceptible to various drugs and that, in some individuals, are also susceptible to psychologic stimuli.

4. Our experimental evidence seems to indicate that the biliary tract, including the hepatic ducts, the common duct, the gallbladder, the sphincter of Oddi, and the Ampulla of Vater, present an anatomico-physiologic entity, fully capable of exhibiting as much dysfunction on a nonorganic basis as other systems in the body. Thus the use of the term biliary dyskinesia seems to be a good one.

5. Any treatment which effectively reduces ductal pressure and increases the volume with less viscous bile should benefit patients with any condition producing bile stasis. ●

Psychosomatic aspects of cancer*

John L. Otto, M.D., Galveston, Texas

Herein is a statement of the useful therapeutic role that a Department of Psychiatry plays in the preparation and aftercare of cancer patients in a large University Hospital.

ALMOST EVERYONE at some time in his life is faced with the problem of cancer, either in himself, his family or close friends. When it happens close to home, the importance of the psychosomatic aspects of this dread condition becomes apparent, but frequently the physician ignores the effect this diagnosis has on the patient and his relatives. Having recently gone through such an experience in my own family, I have been made aware of the importance of this aspect in the total care of the cancer patient.

The first problem that confronts a doctor who has just made a diagnosis of cancer is who should be told. We feel that in all cases a responsible member of the family should be consulted first. This may not be the next of kin, such as the wife or husband, but may be a brother, father, son or friend. The important thing is to consider the entire family and decide on a course of action after consultation with this person. Whether or not the patient is told of the diagnosis depends on his or her personality structure, and whether or not the patient directly asks for the diagnosis. Some patients have asked me not to tell them the diagnosis, but just to go ahead and do what is required. On the other

hand, in fairness to the family, it is necessary that the patient must be encouraged to get his affairs in order.

The attitude of the doctor is extremely important in dealing with a person with hopeless cancer. The physician may, by his manner, transmit this feeling of hopelessness to the patient. This, also, may come from members of the family. If the surgeon or radiologist finds it difficult to maintain interest in this type of patient, he should call on the family doctor or even the psychiatrist to care for the patient in the terminal phases.

Lay people still have many misconceptions about cancer. The attending physician can be of great help if he will sit for a while and chat with the patient and family. Specific questions may be helpful, such as: What do you think causes cancer? What does this sickness mean to you? Surprising answers may be forthcoming: Cancer is caused by a venereal disease. It is the result of uncleanness. The husband may blame himself for having struck his wife on the breast in a fit of anger. Cancer is contagious. Will my children inherit this disease? Many patients and families find it difficult to believe that the cause is unknown, and spend many fruitless hours trying to figure out just what they have done wrong to deserve this affliction.

The Department of Psychiatry in our hospital is being called upon frequently to assist in the care of cancer patients. We first were invited in to assist in the handling of addiction problems and to supervise the other medications for the relief of pain, anxiety, and insomnia. In some cases, with proper psychotherapeutic help, opiates and sedatives could be eliminated; other cases of depressive illnesses were relieved with electroshock or the antidepressive drugs. Management of

*Paper read on May 13, 1960, at the Annual Meeting of the New Mexico Medical Society in Albuquerque, New Mexico. From the Department of Neurology and Psychiatry, University of Texas Medical Branch, Galveston, Texas.

the families was another important contribution and relieved the surgeon of considerable stress.

Much research is in progress concerning the relationship of emotional stress and the development of cancer, the hypothesis being that emotional stress causes glandular malfunctioning. Continued bombardment of tissue by malfunctioning glands triggers cell proliferation, resulting in cancer. Therefore, people with deep seated emotional problems stemming from early childhood should be most vulnerable to cancer. Bacon, Renneker and Cutler of Chicago made a study of 40 women with cancer of the breast. They describe the major behavioral characteristics of these women as:

1. Masochistic character structure.
2. Inhibited sexuality.
3. Inhibited motherhood.
4. Inability to discharge or deal appropriately with anger, aggressiveness or hostility, covered over by a facade of pleasantness.
5. An unresolved hostile conflict with mother, handled through denial and unrealistic sacrifice.
6. Delay in securing treatment.

In my personal experience with both psychoneurotic and psychotic women, cancer of the breast has been extremely rare, and I hasten to add that examination of the breasts is a routine procedure on all patients. The Freudian might explain this by saying that the type of person described above would not be any more likely to seek psychiatric help than she would medical or surgical help, since her tried and true method of adjust-

ment has been denial of the existence of problems, conflicts or disease.

The loss of a specific part or organ may mean a great deal more to one person than another.

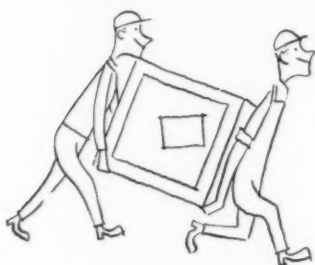
1. Specific effect: A compulsively neat, tidy female might react more violently to the loss of her colon with the resulting colostomy and difficulty in keeping clean than she would to the loss of a breast.

2. Indirect effect: Does the loss block an avenue of expression or work that has been important in maintaining emotional balance (strip tease artist, actress, model)? Does this loss give a socially acceptable excuse, conscious or unconscious, to lie back and be cared for?

3. Symbolic effect: Breasts are symbols to a woman of sexuality and motherliness and loss of one or both would be a real threat to her femininity, even though she is past the period of childbearing and even though she had always substituted a bottle for a breast.

4. Distortions in the body image: Body image is a person's picture of his physical self. Various parts may assume undue importance due to early conditioning. Witness the success of plastic surgeons. The women may have developed the feeling that the only thing attractive about her is her breasts and the loss of one or both would mean the loss, also, of her husband.

Investigation along these lines before surgery in breast cancer may prevent considerable morbidity and unhappiness in these women. •



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Erythroblastosis fetalis*

At the Larimer County Hospital

James F. Hoffman, M.D., Fort Collins

A study and analysis of a relatively rare, but important, blood dyscrasia in a representative county hospital.

SINCE 1954, THERE HAVE BEEN 18 CASES OF erythroblastosis fetalis treated at the Larimer County Hospital in Fort Collins, Colorado. During this time there have been 4,722 deliveries. This represents .38 per cent of the total number of newborns delivered during this time. This does not include stillbirths due to blood group incompatibility (Table 1).

In this series, there are included two cases of ABO incompatibility with moderately severe jaundice and one with severe jaundice. In one of these, the highest bilirubin was 12.0 mgm. on the third day of life, and in the other, the jaundice reached a maximum of 14.0 mgm. on the fifth day. No active treatment was carried out in either of these cases.

One patient, who was treated in 1958 and who developed kernicterus, probably developed erythroblastosis due to B. This was a Negro infant and the seventh child. The six previous pregnancies terminated in normal living children. This infant was born July 30, 1958, and was discharged July 31, 1958. There was a note on the nurses' chart that the sclerae were jaundiced at discharge. This was within the first 24 hours of life. The infant was readmitted August 2, 1958. At this time the temperature was 104° F., and the infant was in poor condition. The direct

bilirubin was 4.8 mgm. and the total 30.5 mgm. The infant received three exchange transfusions, and the serum bilirubin gradually returned to normal levels. He showed evidence of central nervous system symptoms typical of kernicterus. The mother's blood type was O positive, the infant's B positive, and the Coomb's test negative. It is possible that the hyperbilirubinemia in this case was due to sepsis. However, the early onset of jaundice plus the ABO incompatibility is strongly suggestive of erythroblastosis due to the ABO incompatibility.

ABO incompatibility

Erythroblastosis caused by A and B is fundamentally the same as that caused by any other blood group factor. It is estimated that 20 per cent of babies are of a blood group incompatible with the mother and that about 5 per cent of these have clinically recognizable erythroblastosis. It is estimated that erythroblastosis due to A and B is twice as common as that caused by Rh. However, as a rule, these are much milder than those caused by Rh.

There are two explanations for this. First, apparently anti-A and anti-B do not get into the fetus as easily as anti-Rh. Second, anti-A and anti-B are found in all tissues in the body, and anti-Rh is found concentrated only on the red blood cells. Clinically, the diagnosis of hemolytic disease caused by A and B is made by careful observation of the infants in the nursery for the appearance of early jaundice. If the disease is suspected, the diagnosis is made by a weakly positive or a negative Coomb's, A and B compatibility between the mother and the baby, and an elevated serum bilirubin. The aim of therapy

*Presented on February 19, 1960, at the Midwinter Clinical Session of the Colorado State Medical Society.

TABLE 1
Cases of erythroblastosis fetalis treated at Larimer County Hospital,
1954-1959

Baby	Incompati- bility	Mother's blood	Highest bilirubin	Lowest hemoglobin	Coomb's test	trans- Exchange fusion	trans- Simple fusion	Kernicterus
1.	Rh	Rh neg.	37.6	12.3	Pos.	1	1	Yes
2.	Rh	Rh neg.	3.44	13.3	Pos.	1	0	No
3.	Rh	Rh neg.	7.3	15.25	Pos.	0	0	No
4.	Rh	Rh neg.	12.45	11.25	Pos.	1	1	No
5.	Rh	Rh neg.	13.3	9.6	Pos.	1	0	No
6.	ABO	Rh pos.	25.7	11.9	Neg.	3	1	Yes
7.	Rh	Rh neg.	16.5	8.4	Neg.	1	0	No
8.	Rh	Rh neg.	26.5	12.0	Pos.	2	0	No
9.	Rh	Rh neg.	15.2	11.0	Pos.	1	0	No
10.	Rh	Rh neg.	0.9	12.6	Pos.	0	0	No
11.	Rh	Rh neg.	16.0	13.75	Pos.	1	0	No
12.	ABO	Rh pos.	12.0	14.0	Weakly pos.	0	0	No
13.	Rh	Rh neg.	6.4	24.0	Pos.	0	0	No
14.	Rh	Rh neg.	6.6	13.2	Pos.	1	0	No
15.	Rh	Rh neg.	19.02	11.7	Pos.	1	0	No
16.	Rh	Rh neg.	11.5 2.03	8.45	Pos.	2	0	No
17.	Rh	Rh neg.	(14.3 total)	6.23	Pos.	1	1	No
18.	ABO	Rh pos.	14.0	15.0	Neg.	0	0	No

is to keep the indirect serum bilirubin below 20 mgm./100 c.c. of blood (Table 2).

Table 2, which is taken from Allen and Diamond, shows the possibilities of compatible and incompatible infants with respect to ABO.

Rh incompatibility

The remaining 15 cases of erythroblastosis fetalis were due to sensitization to Rh. Only one of these developed kernicterus. This infant was delivered on February 24, 1954. Seven hours after birth, jaundice was first noticed. The cord blood showed 6.3 mgm. of bilirubin and 13.8 grams of hemoglobin. The infant was Rh positive and the Coomb's test was positive. The infant received an exchange transfusion on February 28, 1954. At this time the serum bilirubin had risen to 37.6 mgm. Frequent bilirubin determinations had been done on the infant up to this time, and at 24 hours of life, the bilirubin was 20.6 mgm. The hemoglobin at no time showed a significant drop. The mother was Rh negative and had three living children with no history of hemolytic disease. The antibody titer at five months of pregnancy was negative in the saline diluent and four units in the

albumin diluent. One week prior to delivery, the titer was two units in the saline diluent and 64 in the albumin diluent.

Only one other infant in this series had a serum bilirubin over 20 mgm. This infant was delivered September 30, 1955, and had two exchange transfusions. This first exchange was done during the first day of life, and at this time, the bilirubin was 26.5 mgm. Another exchange was done on the third

TABLE 2
Possible ABO Groups of Mothers and
Their Babies

Mother's Type	Antibodies Always Present in Maternal Serum	Types of Incompatible Babies Who May Have Erythro- blastosis Fetalis	Types of Compatible Babies
O*	Anti-A, and Anti-B	A, B	O†
A	Anti-B	B, AB	O, A
B	Anti-A	A, AB	O, B
AB†	A, B, AB

*In erythroblastosis caused by A or B, mother nearly always Group O. (Type O women do not have Type AB babies.)

†AB women have no incompatible babies, and Type O babies always compatible.

day of life when the bilirubin rose to 24.9 mgm. This infant did not develop kernicterus.

There were two mothers who had more than one child with erythroblastosis. However, two of these were delivered before 1954 and are not included in this series. They were treated by exchange transfusions.

Of the 15 cases due to Rh sensitization, three were mild and received no therapy. The remaining 12 received exchange transfusions. Ten of these received one transfusion and two had two transfusions. None had more than two. All of these children are well and do not have central nervous system damage. In several, a simple transfusion was done at about three to four weeks of age.

One infant was born with marked anemia and the transfusion was life saving. This infant maintained a moderately high direct bilirubin for one week, and it was felt that this was an example of the inspissated bile syndrome. The cord hemoglobin in this infant was 6.23 grams and the hematocrit 23. The bilirubin at birth was 6.3 mgm., and the infant had hepato-splenomegaly. One exchange transfusion was done shortly after birth. Approximately 150 c.c. of serum were withdrawn from the donor bottle before beginning the exchange. A simple transfusion was done at three weeks of life. The child is now progressing normally.

Blood group factors

There are many human blood group factors. Allen and Diamond list 45. These are inherited characteristics belonging to genetically independent families such as ABO, Rh, MNS, Kell, Duffy, and Kidd. These are located on or in the envelope of each red blood cell. All of these factors are antigenic to human beings who lack them. When a person forms antibodies to one of these factors, he is said to be sensitized to that factor. This is the basis for the development of erythroblastosis fetalis. The mother is lacking in one or more of the factors which the father has. The infant inherits the factors from the father, and so there is incompatibility between the blood of the mother and the infant. There is no problem unless the mother has been sensitized. A and B are strongly antigenic and D is also strongly antigenic, but all D negative persons cannot

be sensitized to D. All of the blood factors can cause erythroblastosis, but the remainder are of less clinical importance than A, B, and D.

In blood typing, a serum with human antibodies is added to unknown cells. If these cells contain the specific antigen, agglutination occurs. This can be done with the cells suspended in a weak saline solution. If the cells are suspended in albumin as a diluent, the agglutination properties of the red blood cells are enhanced.

The technic used in the Coomb's test consists of using serum from rabbits that have been immunized against human gamma globulin. This serum is the diluent and, as an example, if red blood cells that are being tested are Rh positive and are coated with anti-Rh D antibodies, this serum combines with the antibodies and allows the red blood cells to agglutinate.

Detection of antibodies is the reverse of blood typing. In this case, the laboratory is dealing with known blood types and unknown serum. This is done by setting up a panel of bloods and testing the serum against them. Titrations of the antibodies are done by making dilutions of the serum and seeing if agglutination still occurs.

Mechanism of sensitization

Maternal sensitization can occur by blood transfusion or intramuscular injection of blood. One c.c. of blood can cause sensitization to Rh in many cases. Whenever a blood transfusion is done, there is the risk of sensitizing the recipient to factors other than Rh. For this reason, a husband should not be used as a blood donor for his wife. Sensitization can also occur during pregnancy, although less than 10 per cent of Rh negative women who have Rh positive husbands become sensitized. This is because many husbands are heterozygous and there is considerable variation in the ease of sensitization of individuals. During pregnancy probably small numbers of red blood cells of the fetus get into the maternal circulation, and this may cause sensitization. An interesting point is that ABO incompatible fetuses almost never sensitize the mother to Rh. At the time of delivery, more fetal blood enters the maternal circulation, and it is at this time that

there is greater risk of sensitization. Thus, obstetrical complications such as caesarean section, curettage, and premature separation of the placenta result in more Rh sensitization than uncomplicated deliveries.

When the mother is sensitized to Rh, the antibody enters the fetal circulation and attaches itself to the red blood cells if these are Rh positive. These cells are then destroyed earlier than normal and all the characteristics of erythroblastosis are associated with this increased red cell destruction. In response, there is increased red cell formation. The antibody-coated red blood cells are apparently normal in every respect, and the only method of distinguishing them is the positive Coomb's test. In most cases, red cell formation keeps up with the red cell destruction so that 80 per cent of the fetuses are born at term and appear normal. In about 20 per cent, the fetus dies in utero or is born with severe anemia. Those born dead near term have massive edema due to heart failure. In general, infants do not die in utero before about 18 weeks.

The red cell formation is reflected in elevated reticulocyte counts and in the increased number of erythroblasts in the blood. The liver and spleen increase in size and extramedullary hematopoiesis occurs in them. One of the most important considerations is the increase in bilirubin in the blood which results from blood destruction. New-born infants have limited ability to convert protein bound bilirubin, which is identified in the Van der Bergh test as indirect bilirubin, into bilirubin glucuronide or direct bilirubin. The indirect bilirubin permeates the blood brain barrier in the first few days of life, causing jaundice of the basal ganglia which results in kernicterus.

Management of hemolytic disease

The problem of the management of hemolytic disease resolves itself into three major problems: First, the threat of stillbirth; second, the treatment of severe illness at birth; and third, the prevention of kernicterus. The majority of cases can be anticipated by blood studies and history. All pregnant women should have Rh typing with anti-D serum. This should be done at each

pregnancy since laboratory errors or errors in clerical work are possible. If a woman is negative and her husband is Rh positive, her blood should be tested for antibodies. If no antibodies are found, a second antibody test should be done at 36 weeks. If this is negative, the likelihood of hemolytic disease is remote. If there are no antibodies early in pregnancy, the chance is about one in 230 that the child will have erythroblastosis. If antibodies are present at the first typing, a repeat test should be run at six months and again at 36 weeks.

If there is an increase in the antibodies during pregnancy, it can be anticipated that the child will probably have erythroblastosis. Blood for exchange transfusion can be drawn and cross-matched with the mother's blood before the baby is delivered. This should be Type O blood. In this way, compatible blood will be ready for use if needed. If the pregnancy is at term, the head engaged, and the cervix soft, effaced, and one to two cm. dilated, labor can be induced. In this way, a planned delivery takes place and personnel and equipment can be made most effectively available for the infant. However, in many instances, it is best to allow pregnancy to terminate spontaneously.

In rare instances, early delivery of Rh sensitized mothers who have had previous stillbirths or who have high titers may be considered. One complication is the rare occurrence of hypofibrinogenemia in the sensitized mothers with severely ill or stillborn infants.

When the infant is born, the cord is clamped immediately and left long. Cord blood is obtained for determination of the Rh type, hemoglobin level, serum, bilirubin, and Coomb's test. A careful physical examination at birth aids in the diagnosis. Enlargement of the liver and spleen, edema, and pallor are important signs. In infants severely ill at birth, it will be obvious that immediate transfusion is necessary. Careful attention to the venous pressure is important in these infants.

The majority of infants are not seriously ill at birth, and it is in this group that adequate treatment will prevent kernicterus. The goal is to keep the indirect serum bilirubin below 20 mgm/100 c.c. of blood.

Criteria for transfusion

There is some divergence of opinion concerning the exact criteria for elective transfusion. In general, if the Coomb's test is positive, an exchange transfusion is done if:

1. The cord hemoglobin is under 14 grams.
2. The serum bilirubin is 4 mgm. or over.
3. The maternal antibody titer is over 1:32.
4. There has been a previous infant with erythroblastosis.
5. There are clinical signs of erythroblastosis.

If none of these indications is present, one may elect to follow the serum bilirubin determination at six-hour intervals, and if the serum bilirubin rises more than 0.5 mgm./hr., exchange transfusion should be done. The serum bilirubin should be kept below 20 mgm. for five days in full-term infants and longer in premature infants.

Under certain conditions, unexpected hemolytic disease occurs. This is diagnosed when early jaundice occurs, or jaundice at any time during the newborn period becomes too marked. This may be due to Rh D incompatibility which was overlooked or incompatibility due to A or B or one of the other blood groups. Regardless of the cause, the indirect bilirubin should be kept under 20 mgm. and the appropriate blood to use is one which is compatible with the mother's serum, using the Coomb's technic.

If no other donor can be found, the mother's blood may be used, though it is probably necessary to remove the mother's serum containing the antibodies.

One case which was delivered on September 5, 1946, and is the first recorded patient with erythroblastosis at the Larimer County Hospital, was given the mother's cells. This baby was delivered by cesarean section and the mother had had one previous cesarean. She was Rh negative. The child was pale at birth and difficult to resuscitate. Jaundice appeared early. The laboratory work the following day showed 8.5 grams of hemoglobin, six to nine erythroblasts/100 w.b.c., and 2,380,000 r.b.c. Blood was drawn from the mother, the serum removed, and the cells were washed and resuspended in saline. One hundred ten c.c. of this were given to the baby. He made a good recovery and is in good health with no central nervous system involvement.

Other causes of jaundice are cytomegalic inclusion disease, infectious hepatitis, sepsis, hemorrhage, toxoplasmosis, torulosis, syphilis, large doses of vitamin K, gantrisin, and congenital hemolytic anemia.

Summary

In summary, during the past six years there have been 18 cases of erythroblastosis fetalis treated at the Larimer County Hospital. Three of these were due to ABO sensitization and 15 to Rh sensitization. Two of the group developed kernicterus. •

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THE BOOK CORNER

Book reviews

Diseases of Metabolism, Detailed Methods of Diagnosis and Treatment: Edited by Garfield Duncan, M.D. 4th edition. Phila., W. B. Saunders Company, 1959. 1104 p. Price: \$18.50.

The fourth edition is the first revision of this reliable standard in the field of metabolism since 1952. The format of the previous three editions has been changed to a double column page which makes for easier reading and quicker spot reference. The talents of numerous authorities have been utilized in appropriate sections, some of the original contributors having been replaced. James Salter now has replaced Abraham White on protein metabolism and has revamped this section, placing more emphasis on recent knowledge of metabolic pathways. Samuel Gurin is the new author of the section on lipid metabolism and has highlighted newer discoveries in this rapidly changing field and their effect of previously established concepts, leaving some of the basic chemistry for discussion in standard texts of physiologic chemistry. The pace of modern drug production is such that even a text as recent as this discusses only tolbutamide from among the oral antidiabetic agents. The chapter on diabetes, however, is excellent. Space limitation may have prevented any comprehensive discussion of artificial dialysis in the section on renal disease or in that on water balance. The bibliographies in these, as well as in other sections, however, should serve to guide the reader to more detailed information which may be lacking because of such space limitation.

George H. Curfman, Jr., M.D.

Anatomy: a Regional Study of Human Structure: By Ernest Gardner, M.D., D. J. Gray, Ph.D., and Ronan O'Rahilly, M.D. N. Y., Saunders, 1960. 990 p. Price: \$15.00.

Gardner, Gray and O'Rahilly have created in their recent text, entitled simply "Anatomy," an exceptional reference on a time-honored subject. The text can be described as clear and concise, with a definite simplicity and ease of reading. The approach is primarily a regional one with specified sections devoted entirely to one area of the body such as thorax, upper extremity, etc. However, the reader is offered a brief but sufficient systemic approach in the first ten chapters. Here, the reference point is broken into general systems, such as vascular, skeletal, nervous, etc., growth and development and, finally, radiologic anatomy.

Throughout the book, numerous sufficient graphic illustrations are provided. These excellent illustrations are supplemented with radiologic views of the skeleton. Brief resumes of the embryology and comparative anatomy are also in-

cluded at various points. Where the reader may desire further information on a subject, the authors have included numerous footnoted references. Considerable detail is given to the correlation of the anatomical and functional aspects of anatomy.

Perhaps the text's greatest deficiency lies in its lack of minute detail as found in other works. But, then, the authors state that their approach was intended as one of "moderate regionalism" designed as sufficiently brief for the undergraduate student, emphasizing the relationship between structure and function and offering relevant references for the postgraduate student. The reviewer highly recommends the text as an excellent and practical reference.

Robert G. Volz, M.D.

The Care of Minor Hand Injuries: By A. E. Flatt, M.D. St. Louis, C. V. Mosby Company, 1959. 266 p. Price: \$9.50.

This is a 266 page, well illustrated book devoted to the practical care of the many types of hand injuries. By listing the contents of the book by chapters it is clear that the entire field of minor hand injuries is covered.

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|--|--|
| 1. Functional anatomy. | 9. Crush injuries. |
| 2. Principles of care. | 10. Tendon injuries. |
| 3. Surgical technique. | 11. Joint injuries. |
| 4. Classification and examination of injuries. | 12. Fractures. |
| 5. Wounds of the skin. | 13. Burns. |
| 6. Injuries to the nail. | 14. Infections. |
| 7. Pulp loss. | 15. Miscellaneous injuries and wounds. |
| 8. Amputations. | |

Finally there is a list of recommended additional reading covering the subject in each chapter.

It is interesting to note that even the unusual grease gun injury is well discussed.

The author's approach is clear, concise and rather dogmatic. Personally I feel this approach is best for most surgeons as it gives a proven method of doing the job and avoids confusion and indecision.

Many books have been written regarding hand injuries. Some are more complete but none are more practical or better.

A Practical Guide for General Surgical Management: By Julian A. Sterling, M.D. Vantage Press, 1959. Price: \$3.00.

This 67 page monograph would be more descriptively titled, "The organization of the hospital surgical staff with an outline for the hospital care of the surgical patient."

The material related to the administrative details is well presented and, although it may not be used in its given form, it would aid a chief of surgery or his chief resident in the administration of the surgical service. The preoperative and postoperative care given for surgical cases would be welcomed by the house staff, especially the interns and first year residents.

Kenneth Jankovsky, M.D.

ROCKY MOUNTAIN MEDICAL JOURNAL

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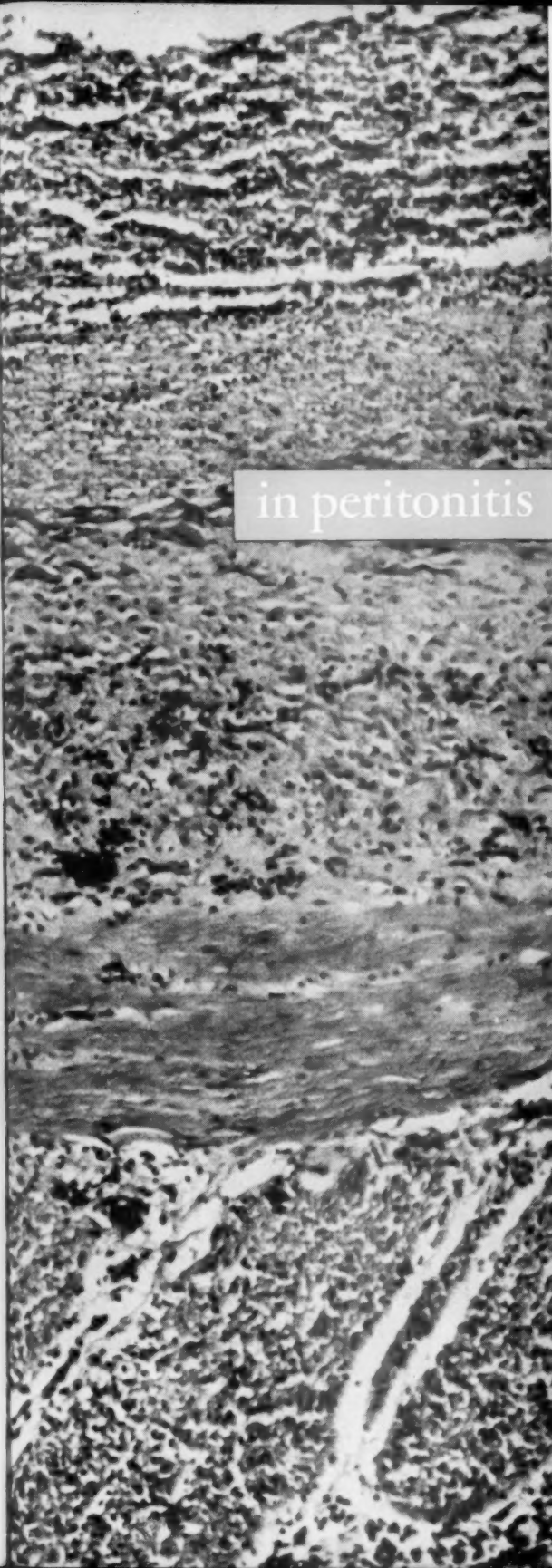
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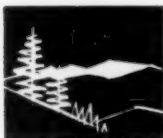
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ORGANIZATION



COLORADO

Scientific papers wanted for Annual Session

Scientific papers for the Annual Session of the Colorado State Medical Society, October 1-4, in Denver, are being solicited by the Council on Scientific Education.

Members of the Society who are interested in presenting a paper at the Annual Session should submit the title and an abstract of any paper or papers they wish to offer. This material should be in the hands of the Council by May 15 for consideration. Send your material to Council on Scientific Education, Colorado State Medical Society, 835 Republic Building, Denver 2.

Announcement

28th Annual Spring Clinic, April 28 and 29, 1961. Minnequa University Club, Pueblo, Colorado.

Obituaries

John McDonald, Immediate Past President

Dr. John L. McDonald of Colorado Springs, who retired from the presidency of the Colorado State Medical Society at last September's Estes Park Annual Session, died March 15 at Penrose Hospital. He had been hospitalized March 12. Death was due to complications from a severe infectious hepatitis incurred several years ago.

For many years a leader in activities of the El Paso County Medical Society, Dr. McDonald had held many offices in that society including its presidency, served several terms in the State Society's House of Delegates and as a member of several State Society committees including its Public Policy Committee. He was also chairman of the committee which developed the recent reorganization of the State Society's internal Council and Committee structure, finally put into effect at the close of the 1959-1960 state presidency.

Dr. McDonald was born January 8, 1903, in Iona, Cape Breton, Nova Scotia, and was educated at St. Xavier College, the University of Toronto, and Harvard Medical School. He interned at Boston City Hospital and had residencies at Glockner Hospital (now renamed Penrose Hospital) and Cragmor Sanatorium, both in Colorado Springs. He began the practice of internal medicine in Colorado Springs but after additional postgraduate

study soon specialized in cardiology, a field in which he was a recognized leader. His presidency of the Colorado State Medical Society was marked not only by the reorganization of the Society's committees, but by the establishment of the Society's Unified Retirement Investment Trust which has attracted national acclaim.

He was a member of a large family and is survived by nine brothers and sisters in addition to his wife, two daughters and one son and two grandchildren.

Young Pueblo oculist dies suddenly

Roy Calvin Richardson, M.D., died on January 5, 1961, at the age of 49. Dr. Richardson was born in Worcester, Mass., on November 2, 1912, and was a graduate of Carroll College, in Waukesha, Wisconsin. He graduated as a medical doctor from Marquette University School of Medicine at Milwaukee, Wisconsin. He took his residency at the Colorado University School of Medicine after doing general work at Two Rivers, Wisconsin, and Neopit, Wisconsin. In Pueblo he was associated with the Corwin Clinic as an ophthalmologist.

Dr. Richardson was a member of the Pueblo County Medical Association, the Association of American Physicians and Surgeons, and the Colorado Ophthalmological Society. He was also a member of the Pueblo Masonic bodies, the South Pueblo Blue Lodge, the Southern Colorado Consistory and the Al Kaly Shrine. In addition he was active in the Elks organization and was a member of the Pueblo Country Club and Pueblo Chamber of Commerce.

Surviving are his wife and three sons.

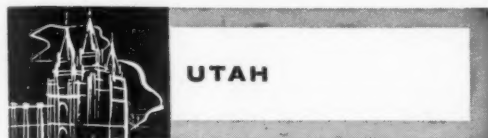
Noted C. U. medical professor dies

Dr. M. Ray Gottesfeld died recently in Denver at the age of 54 following a brief illness. He was born in Austria on April 12, 1906, and came to the United States as a child. He received his preliminary education from Harden-Simms College and the University of Pennsylvania where he received his A.B. and Master of Science degrees. His medical degree came from Baylor University College of Medicine in Houston and he was licensed in Texas and Colorado. He was interested in obstetrics and gynecology and was the former chief of these subjects at Denver General and Mercy Hospitals. He became an associate professor of obstetrics and gynecology at the C.U. Medical School and served as a consultant for the National Jewish Hospital.

He was on the staff of many Denver hospitals and was President of the medical staff at Rose

Memorial Hospital in 1951. He was a fellow of the American College of Surgeons and a member of the American Board of Obstetrics and Gynecology. Dr. Gottesfeld was a member of Green Gables Country Club and was a member of Temple Emanuel, serving on the Board of Directors for many years.

He is survived by three sons and a daughter, in addition to his wife Marion.



Obituaries

DAVID GALLOWAY EDMUNDS

Dr. David Galloway Edmunds, 79, a Salt Lake physician and surgeon, died Thursday, February 16, 1961. Dr. Edmunds had been on the staff of the Latter Day Saints Hospital from 1918 until the time of his death. He was Secretary of the Utah State Medical Association from 1938 until 1947 and was Honorary President in 1951. Dr. Edmunds attended the University of Utah and Brigham Young University. He was a graduate of Rush Medical College.

ALFRED CYRIL CALLISTER

The first Dean of the University of Utah's four year College of Medicine and prominent Salt Lake surgeon, Dr. Alfred Cyril Callister, died Thursday, February 9, 1961, at approximately 9:00 a.m. at his home after a lingering illness.

Because of his influence the two year medical school at the University of Utah became a four year school in 1942. He personally recruited a large percentage of the original teaching staff. He lectured in hygiene himself for 30 years and served as Dean from 1942-45. The medical school has achieved world-wide recognition for the excellence of its teaching and research.

Dr. Callister was former President of the Salt Lake County Medical Society as well as the Utah State Board of Health; Fellow of American College of Surgeons and the American Medical Association, and a member of the Utah State Medical Association. He was also founder of the American Board of Plastic Surgery and served as plastic surgeon for the LDS Primary Children's Hospital for a number of years.

He was born Sept. 24, 1894, in Salt Lake City, a son of Thomas Alfred and Bertha James Callister. His premedical education was obtained at the University of Utah, and he was graduated as an M.D. from Harvard Medical School.

He was a winner of the John Harvard Fellowship, was a member of Alpha Omega Alpha, honorary medical fraternity, and a charter member of Phi Kappa Alpha social fraternity.

for APRIL, 1961

He was an intern at Peter Bent Brigham and Boston City Hospital, and later was resident surgeon at Boston City Hospital for three years. His practice in Salt Lake City was begun in 1920.

Dr. Callister served as an officer in the Office of Civilian Defense during World War II. He was also chairman of procurement and assignment for physicians in Utah.

Other activities include membership in the Salt Lake Rotary, University, and Country Clubs. He was on the Board of Directors of Zions Savings and Loan Association, an active member of the Republican party, and a member of the Church of Jesus Christ of Latter Day Saints.

JOHN CLARK HUBBARD

John Clark Hubbard, M.D., died at the age of 70 in Price on October 15. Dr. Hubbard was active in the community of Price and received many high honors for professional work. One of the latest awards received by Dr. Hubbard was his acceptance into the American Medical Society of Vienna last January. He also earned a fellowship to the International College of Surgeons in 1952. He was a member of the founder's group of the American Board of Abdominal Surgery, and a member of the Utah State Medical Association, serving as President in 1948 and 1949. Dr. Hubbard served as Chief of Staff of the Price City-County Hospital in Price from 1943 to 1947, and was a member of the Carbon County Medical Society.

He graduated from Brigham Young College in Logan in 1916 and from the University of Chicago in 1917. He took summer courses at the University of Utah in 1915 and 1916, attended the University of Chicago and graduated from the Rush Memorial College in 1920.



Albuquerque doctor honored

Dr. Jack W. Grossman of Albuquerque, New Mexico, has been elected a Fellow in the American College of Radiology, according to an announcement from the College headquarters in Chicago.

Election to Fellowship is an honor bestowed by the College of Radiology in recognition of outstanding achievement and contribution to the art and science of medicine in general and radiology in particular.

Investiture into Fellowship was made on Friday, February 10, 1961, at the Drake Hotel in Chicago as a highlight of the College Annual Meeting and Conference of Teachers of Clinical Radiology.

Annual Meeting Program on next page

PROGRAM

Seventy-ninth Annual Meeting New Mexico Medical Society

May 17-20, 1961, La Fonda, Santa Fe

General Information

The remodeled La Fonda will serve as headquarters for the Seventy-Ninth Annual Meeting. Make reservations by writing directly to the Reservation Manager.

To members of the New Mexico Medical Society, interns, residents, nurses, and those in military service there will be no registration fee. There will be a \$10.00 registration fee for Doctors of Medicine who are not included in the above categories.

All business sessions of the New Mexico Medical Society will have been completed prior to the beginning of the First Clinical Program.

The Scientific Program Committee will sincerely appreciate your comments concerning any phase of the program.

Tuesday, May 16

9:00-2:00—Orientation Course for New Members (includes luncheon).

SCIENTIFIC SESSIONS

Wednesday, May 17

First Clinical Session

2:15—"Peptic Ulcer Coexisting With Chronic Pulmonary and Liver Disease—Clinical and Theoretical Implications," Ben Eiseman, M.D.

3:00—"Nerve Entrapment Syndrome," Clinton Morgan, M.D.

3:30—Clinical Pathological Conference. Moderator: William Hentel, M.D. Participants: Edgar S. Gordon, M.D., Vincent Collins, M.D., Ben Eiseman, M.D., Harry Ellis, M.D.

Thursday, May 18

Second Clinical Session

9:00—"Lipid Metabolism and Atherosclerosis," Edgar S. Gordon, M.D.

9:45—"The Internal Cardiac Pacemaker in the Treatment of Stokes-Adams Syndrome," Alan L. Frankel, M.D.

10:00—"The Duration of Cancer Prior to Diagnosis," Vincent P. Collins, M.D.

11:15—Panel: "Pancreatitis." Moderator: Andrew Babey, M.D. Participants: Edgar S. Gordon, M.D., Vincent P. Collins, M.D., Ben Eiseman, M.D., Peter Van Schoonhoven, M.D.

Guest

Robert H. Barter, M.D.
Washington, D. C.

Marvin A. Block, M.D.
Buffalo, New York

Horace E. Campbell, M.D.
Denver, Colorado

John S. Chapman, M.D.
Dallas, Texas

Vincent P. Collins, M.D.
Houston, Texas



Friday, May 19

Third Clinical Session

9:00—"Unclassified Mycobacteria in Children," Edwin L. Kendig, M.D.

9:45—"Unusual Varieties of Obstetrical Hemorrhage," Randolph V. Seligman, M.D.

10:00—"Ectopic Pregnancy: A Constant Diagnostic Problem," Robert H. Barter, M.D.

11:15—"Monitoring During Anesthesia," John W. Pender, M.D.

Group Clinical Session A

TRAUMA AND DISASTER PLANNING SYMPOSIUM ON TRAUMA

Santa Fe Room

2:00—"General Principles of Shock," John W. Pender, M.D.

2:30—"Orthopedic Traumatic Problems," John F. Boyd, M.D.

3:00—"We Are Entitled to Modern Crash Protection in Our Automobiles," Horace E. Campbell, M.D.

PANEL ON DISASTER PLANNING

4:00—"Step by Step Approach to General Disaster Planning," Col. S. W. Cavender, M.D.

4:45—"Bernalillo County Medical Association's Approach to Disaster Planning," General Albert Schwichtenberg, M.D.

Group Clinical Session B

ALCOHOLISM

Coronado Room

2:00—"General Aspects of the Problem of Alcoholism," Marvin A. Block, M.D.

3:00—"Psychiatric Aspects of the Problem of Alcoholism," William F. Sears, M.D.

3:45—"The New Mexico Situation Regarding Alcoholism," Warren Brown, M.D.

4:15—Panel: "Alcoholism." Moderator: Warren Brown, M.D. Participants: Marvin A. Block, M.D., Charles A. Beeson, M.D., Earl Latimer, M.D.

Saturday, May 20

Symposium on Tuberculosis

Santa Fe Room

THE MEDICAL ASPECTS OF TUBERCULOSIS

9:00—"Tuberculosis in Childhood," Edwin L. Kendig, M.D.

10:00—"Adult Tuberculosis," Sumner Cohen, M.D.

11:00—"TBC-Like Pulmonary Syndromes," John Chapman, M.D.

THE SOCIO-ECONOMIC ASPECTS OF TUBERCULOSIS

2:00—"The Socio-Economic Aspects of TB," Mrs. Ruth Taylor

3:00—"Joint Report of the Public Health Committee and the New Mexico Tuberculosis Coordinating Council," Hugh B. Woodward, M.D.

4:30—Panel on New Mexico Tuberculosis Report. Moderator: Stanley J. Leland, M.D. Participants: Edwin L. Kendig, M.D., Sumner Cohen, M.D., John Chapman, M.D., Mrs. Taylor.



REGISTRATION—MAY 16, 17 and 18

Wednesday, May 17

9:00-11:30—Hospitality Coffee, La Fonda

11:00—Executive Meeting

Thursday, May 18

9:30—Delegates Meeting

12:30—Luncheon. Speaker: Mrs. Harlan English, Danville, Ill., President-elect, Auxiliary to the American Medical Association

2:00—Executive Meeting

Speakers

Ben Eiseman, M.D.
Denver, Colorado

John H. Furbay, Ph.D.
Detroit, Michigan


Edgar S. Gordon, M.D.
Madison, Wisconsin

Edwin L. Kendig, M.D.
Richmond, Virginia

John W. Pender, M.D.
Palo Alto, California



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Lifts depression...as it calms anxiety!

Smooth, balanced action lifts depression as it calms anxiety...rapidly and safely

Balances the mood — no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient — they often aggravate anxiety and tension.

And although amphetamine-barbiturate combinations may counteract excessive stimulation — they often deepen depression.

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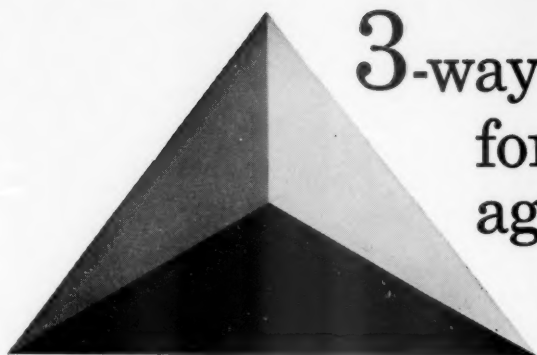
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Tumor Clinic and Registry

The Mary E. Swift Tumor Clinic and Registry will hold its 7th annual lectureship April 22, 1961, Butte, Montana. The title of the lectureship will be "The Total Care of the Cancer Patient," and will feature Dr. Jeanne Bateman, Internist of Washington, D. C.; Dr. Elmer Key Sanders, Surgeon, Houston, Texas; Dr. Edward M. Litin, Psychiatrist from Minnesota, and Dr. Ian G. MacDonald, Oncologist, Los Angeles, California. The course will carry five and one-half hours of category I credit for the American Academy of General Practitioners.

Psychiatrist vacancies

Late this spring Denver General Hospital will have several vacancies for full-time or part-time psychiatrists. Those interested should contact Dr. Byron Pollack, Chief of Medicine of DGH.

American College of Chest Physicians to hold joint meeting with A.M.A. in 1961

The 27th Annual Meeting of the American College of Chest Physicians will be held at the Commodore Hotel, New York City, Thursday, June 22, through Monday, June 26. Scientific sessions will open Saturday, June 24, and will continue through Monday, June 26.

A joint session with the Section on Diseases of

JAMA

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VOL. 174, NO. 5

OCTOBER 1, 1960

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the Chest of the American Medical Association will be held at the Coliseum, Monday, June 26. This will be the first joint meeting in the history of the two societies.

The popular Fireside Conferences, also to be a joint session sponsored by both the A.M.A. and the College, will be held at the Commodore Hotel, Monday evening, June 26.

The following physicians from Denver will participate in the College program: S. Gilbert Blount, Jr., Sidney H. Dressler, E. R. Duchesne, David M. Gould, John B. Grow, Allen Hurst, Byron E. Poolock (Aurora), and David H. Watkins.

Fort Logan Mental Health Center

The Fort Logan Mental Health Center had its groundbreaking ceremony February 3. The new hospital, a part of the Colorado State System, will accept its first patients by the end of 1961.

The program planned for the Fort Logan Mental Health Center envisions an institution which is closely integrated with local mental health clinics, through which patients will come to the hospital and which will also provide after-care and follow-up services. Team members of all professional disciplines will offer intensive treatment to patients, maintain liaison with the local clinics and provide them with professional resources. Training and research programs are also planned for the future.



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174:474, Oct. 1, 1960.

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